

**Title:** Barriers to utilization of cervical cancer screening in Sub Sahara Africa: a systematic review

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## **ABSTRACT**

**Background:** Cervical cancer is the commonest cause of cancer-related death in Sub-Saharan Africa (SSA). Both primary and secondary preventive services are available but utilization remain low. This systematic aims to summarize reported barriers preventing women from utilizing cervical cancer screening services in SSA.

**Method:** Electronic searches on MEDLINE, EMBASE, [PsycINFO](#), BIOSIS preview, Global Health, PubMed, Cochrane library, CINAHL, ISI Web of Knowledge and Google scholar and quality assessment of the included studies were performed. A meta-analysis was applied to identify major themes.

**Results:** Eight studies exploring reasons women did not utilize cervical cancer screening were included. SSA women reported similar barriers despite cultural and language diversity in the region. Women reported fear of screening procedure and negative outcome, low level of awareness of services, embarrassment and possible violation of privacy, lack of spousal support, societal stigmatization, cost of accessing services and health service factors like proximity to facility, facility navigation, waiting time and health care personnel attitude.

**Conclusion:** Strategies for improving uptake and utilization of cervical screening in SSA should focus on improving cervical health education, addressing cultural beliefs and practices and improving spousal support and empowering women, as well as addressing physical access problem, costs and improving staff attitude.

**Keywords:** cervical cancer screening, Sub Sahara Africa, barriers, systematic review

## INTRODUCTION

About 267.9 million women above the age of 15 years old living in Africa are at risk of developing cervical cancer. Over 80,000 African women are diagnosed with cervical cancer annually with 75% (60,000) mortality rate, and mostly are found in Sub-Saharan Africa (Denny and Anorlu, 2012). The incidence of cervical cancer in Sub-Saharan Africa is relatively high with an incidence rate of 50 per 100,000 and average age standardized rate (ASR) of 31 per 100,000 women across the whole region (WHO, 2012).

Sub-Saharan Africa (SSA) is part of the continent of Africa below the Sahara desert and extends from the desert transition zone of the Sahel savanna to the cape of South Africa. The region consists of 47 countries, all economically classified as developing countries with some of the worse human development and health indices in the world (Denny and Anorlu, 2012; World Bank, 2014). Geographically, the countries in this region are grouped into Central, Western Africa, Eastern Africa and Southern Africa (UN, 2013). There is significant variation in the region, with the highest ASR in the Eastern African countries, 42.7 and the least in Central African region, 28. Southern Africa and Western Africa have an ASR of 38.2 and 29.3 respectively (Parkin et al., 2008).

The overall prevalence of Human Papilloma Virus related cervical cancer (HPV) in women with normal cytology is about 21.8%. HPV 16 and 18 are the common HPV strains in SSA and their overall combined estimates prevalence is 69.2% with variation of 43.7% in Senegal to 90.2% in Ethiopia (Firnhaber et al., 2010).

Until recently, little attention was given to cervical screening program in SSA and only one country, South Africa, has a national screening program (WHO, 2002). There have been some improvements in term of awareness and availability of services. However, cervical cancer screening service coverage remains low (Louie et al., 2009). In SSA, the best recorded urban and rural cervical screening coverage was in Congo (20.2% and 14.0% respectively), and the worst recorded coverage of 1.6% and 0.4% for urban and rural areas was in Ethiopia (Ferlay et al., 2010). Irrespective of population dynamics and changing risk factors, future burden of cervical cancer is projected to rise to almost 120,000 incidence cases annually by 2025; an increase of 67% from 2002 (Denny et al., 2006).

However, apart from Pap smear testing, different option such as Visual Inspection with Acetic Acid (IARC, 2014) is available, and despite local health promotion efforts to create awareness and improve uptake (Wamai et al, 2012; Maree et al, 2011; Mosavel et al, 2009), utilization of cervical cancer screening services remains low in SSA. Given the public health burden of disease in SSA, it is imperative to understand reasons women are not utilizing cervical screening services. This review therefore aims to examine the barriers causing low uptake and utilization of cervical screening services in SSA. Employing a systematic review to bring different individual studies within the region together provides an overview and understanding of issues that cut across the region as well as those that are peculiar to certain areas.

## METHODS

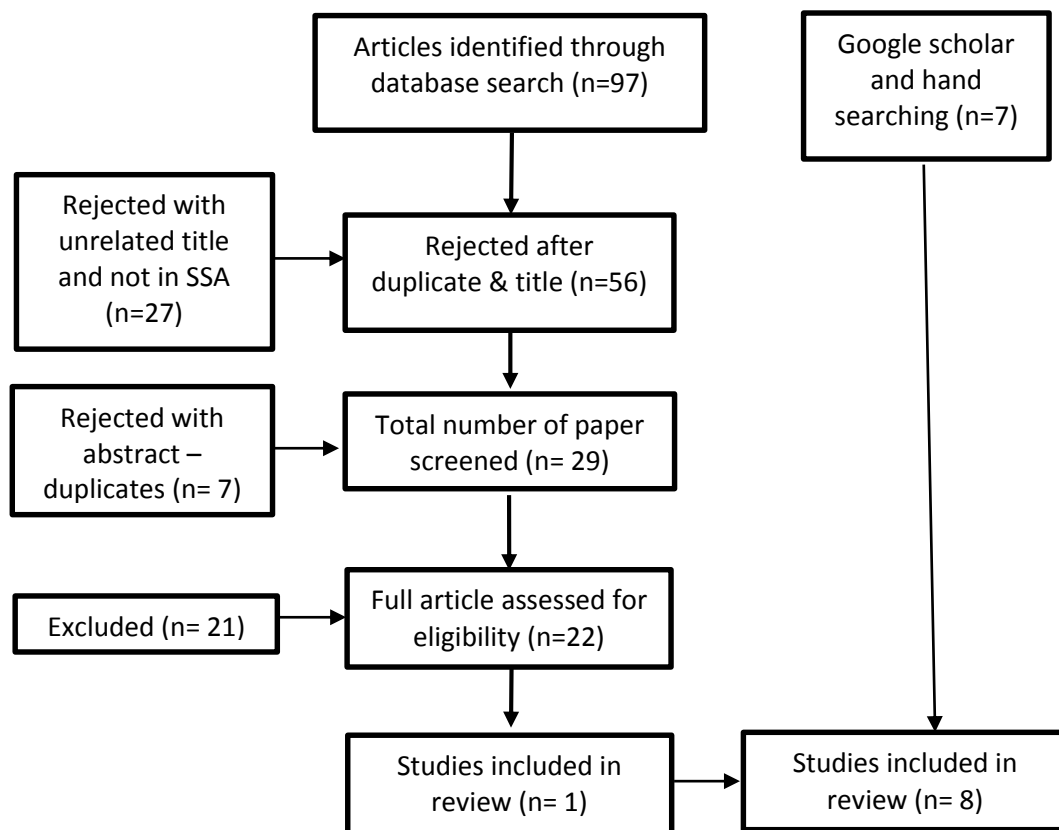
Electronic databases MEDLINE, EMBASE, [PsycINFO](#), BIOSIS preview, Global Health, PubMed, Cochrane library, CINAHL, and ISI Web of Knowledge were searched from 1970 to March 2014. Primary concepts of 'cervical cancer screening' 'barriers', 'facilitators', 'utilization', and 'Africa' were expanded to generate additional keywords for the search. Boolean operators were used to combine the terms. For example ('cervical cancer screening'

OR 'HPV' OR 'Pap Smear' OR 'visual inspection with acetic acid') AND ('barriers' OR 'utilization' OR 'factors') AND (Africa).

## Study selection

Figure 1 shows the selection process of the articles retrieved. The initial database search returned 56 published English-language studies after removing unrelated titles. The abstracts were read and studies that did not meet the inclusion criteria were excluded. After removing duplicates, this resulted in 22 studies investigating cervical cancer screening. After full article examination, only 1 study (Williams et al, 2013) met the inclusion criteria. The rest were excluded for reasons being, prevalence studies, cross-sectional studies examining knowledge score and perceived susceptibility and risk, policy documents, and those that did not address barriers or facilitators. Further search was conducted using Google Scholar and hand searching; these approaches resulted in 7 studies (Gatune and Nyamongo, 2005; Mutyaba et al, 2007; Fort et al, 2011 Ngugu et al, 2012 Ndikom and Ofi, 2012; Teng et al, 2014; White et al., 2012) that met the inclusion criteria.

Figure 1 Flowchart of study selection



This systematic review conforms to the PRISMA statement (PRISMA group, 2009).

## Analysis strategy

Standard methods for thematic analysis (Boyatzis, 1998; Braun and Clarke, 2006) were applied, with a meta-thematic analysis performed to collate and code data into major themes (Duggleby et al, 2012).

## RESULTS

### Study characteristics

Table 1 provides information on the research methods, year, study location, and the focus of the included studies. The 8 studies were published between 2005 and 2014 and they comprised of a rich mixture of population from different region and countries in Sub-Sahara Africa. Two studies were conducted in the West African region (Nigeria and Ghana), another four in the East Africa (Kenya and Uganda), and the remaining two studies from the Southern African region (Malawi and Zambia).

Table 1 Included studies

Authors/year	Country/ study site	Sample size	Title(study design)
William et al, 2013	Kumasi, Ghana	220	Assessment of psychological barriers to cervical cancer screening among women in Kumasi Ghana using a mixed methods approach. (Mixed methods study)
Gatune and Nyamongo, 2005	Kenya	160	An ethnographic study of cervical cancer among women in rural Kenya: is there a folk causal model (qualitative study)
Mutyaba et al, 2007	Nsangi, Uganda	46	Influences on uptake of reproductive health services in Nsangi community Uganda and their implication on cervical screening. (qualitative study)
Fort V et al, 2011	Mulanje, Malawi	20	Barriers to cervical cancer screening in Mulanje Malawi: a qualitative study. (qualitative study)
Ngugi et al., 2011	Thika, Kenya	498	Factors affecting uptake of cervical cancer early detection measures among women in Thika, Kenya.(qualitative study)
Ndikom and Ofi, 2012	Ibadan, Nigeria	82	Awareness, perception and factors affecting utilization of cervical screening services among women in Ibadan, Nigeria: a qualitative study. (qualitative study)
White et al., 2012	Zambia	60	Motivation and experience of women who accessed 'see and treat' cervical cancer prevention services in Zambia.(qualitative study)
Teng et al. 2014	Uganda	16	Understanding the role of embarrassment in gynaecological screening: a qualitative study from the ASPIRE cervical cancer screening project in Uganda

### Study quality assessment

The eight studies were subjected to a quality assessment using the CASP checklist (Oram et al, 2012; NHS, 2012). Codes were allocated for the components in the checklist; study that failed to answer the research question or meet criteria was scored 0; 1 for those partially answered the research question/meet criteria; 2 for those fully answered research question fully or met all criteria; and NA as Not Applicable. For any study to be included, it is imperative that the study scores a minimum 1 score for first two components of the CASP checklist. All included studies fulfilled these criteria (table 2).

Table 2 Quality assessment

CASP checklist	Gatune & Nyamongo, 2005	Mutyaba et al., 2007	Fort et al. 2011	Ngugi et al. 2011	Teng et al. 2014	White et al. 2012	Ndikom and Ofi, 2012	William et al., 2013
Was there a clear statement of the aims of the research	2	2	2	2	2	2	2	2
Is a qualitative methodology appropriate	2	2	2	2	2	2	2	2
Was the research design appropriate to address the aims of the research?	1	2	1	2	2	2	2	2
Was recruitment strategy appropriate to aims of the research	1	1	1	1	1	1	1	1
Was the data collected in a way that addressed the research issue	2	2	2	2	2	2	1	2
Has the relationship between the researcher and participants been adequately considered	0	1	1	1	1	1	0	1
Have the ethical issues been taken into consideration	2	2	2	2	2	2	2	2
Was the data analysis sufficiently rigorous	1	2	1	2	2	1	1	2
Is there a clear statement of findings	2	2	2	2	2	2	2	2
How valuable is the research	1	2	2	2	1	2	1	2
<b>SCORE</b>	14	18	16	18	17	17	14	18

## RESULTS

Reported barriers of personal and institutional nature preventing utilization of cervical cancer screening services were grouped and coded respectively into major themes. At the personal level, fear of pain from the procedure and of outcome; poor knowledge of cancer and screening; financial constraint, cultural and psychological barriers are major personal barriers to cervical screening, and reported profound social consequences and possibility of exclusion also affects uptake. These along with institutional barriers like physical access to services, and health service factors are factors which need to be addressed before it is possible to scale up cervical cancer preventative services (table 3). None of the studies addressed perceived facilitators of cervical screening using qualitative approaches; all studies elicited views on barriers to screening.

Table 3: Key barrier themes and number of studies (n=8) in which theme addressed

Key themes	No. of studies
<b>Fear</b> <ul style="list-style-type: none"> <li>• Fear of pain from procedure</li> <li>• Fear of outcome</li> </ul>	<ol style="list-style-type: none"> <li>1. Gatune and Nyamongo, 2005</li> <li>2. Mutyaba et al. 2007</li> <li>3. Ngugi et al., 2011</li> <li>4. Fort et al, 2011</li> <li>5. Teng et al, 2014</li> <li>6. White et al, 2012</li> <li>7. William et al, 2013</li> <li>8. Ndikom and Ofi, 2012</li> </ol>

<b>Low level of knowledge and awareness about cervical cancer and screening</b>	<ol style="list-style-type: none"> <li>1. Gatune and Nyamongo, 2005</li> <li>2. Mutyaba et al. 2007</li> <li>3. Fort et al, 2011</li> <li>4. Ngugi et al., 2011</li> <li>5. Ndikom and Ofi, 2012</li> <li>6. William et al, 2013</li> </ol>
<b>Screening is unnecessary:</b> <ul style="list-style-type: none"> <li>• Screening is unnecessary if no symptoms</li> <li>• Low risk</li> <li>• Low susceptibility</li> <li>• Most see no benefit in screening</li> <li>• Screening not important</li> </ul>	<ol style="list-style-type: none"> <li>1. Gatune and Nyamongo, 2005</li> <li>2. Fort et al, 2011</li> <li>3. Ngugi et al., 2011</li> <li>4. Ndikom and Ofi, 2012</li> <li>5. Teng et al.; 2014</li> </ol>
<b>Physical access</b> <ul style="list-style-type: none"> <li>• Lack of facility for screening</li> <li>• Health facility distance, navigation issues</li> <li>• Distance and cost of transportation</li> <li>• Services not easily accessible</li> </ul>	<ol style="list-style-type: none"> <li>1. Gatune and Nyamongo, 2005</li> <li>2. Mutyaba et al. 2007</li> <li>3. Fort et al, 2011</li> <li>4. Ngugi et al., 2011</li> <li>5. Ndikom and Ofi, 2012</li> </ol>
<b>Health care worker attitude</b>	<ol style="list-style-type: none"> <li>1. Gatune and Nyamongo, 2005</li> <li>2. Mutyaba et al. 2007</li> <li>3. Ngugi et al., 2011</li> <li>4. Ndikom and Ofi, 2012</li> <li>5.</li> </ol>
<b>Modesty</b> <ul style="list-style-type: none"> <li>• Embarrassed with procedure</li> <li>• Privacy and embarrassment</li> <li>• Cultural constraints about expression.</li> <li>• Gender of care giver</li> </ul>	<ol style="list-style-type: none"> <li>1. Gatune and Nyamongo, 2005</li> <li>2. Teng et al, 2014</li> <li>3. White et al, 2012</li> <li>4. William et al, 2013</li> </ol>
<b>Health care worker attitude</b>	<ol style="list-style-type: none"> <li>6. Gatune and Nyamongo, 2005</li> <li>7. Mutyaba et al. 2007</li> <li>8. Ngugi et al., 2011</li> <li>9. Ndikom and Ofi, 2012</li> <li>10.</li> </ol>
<b>Financial constraints</b> <ul style="list-style-type: none"> <li>• Cost of screening</li> <li>• Cost of transportation</li> </ul>	<ol style="list-style-type: none"> <li>1. Ndikom and Ofi, 2012</li> <li>2. Mutyaba et al. 2007</li> <li>3. Ngugi et al., 2011</li> <li>4. Fort et al, 2011</li> </ol>
<b>Cultural issues:</b> <ul style="list-style-type: none"> <li>• Shame of sickness</li> <li>• Fatalistic view</li> <li>• Stigmatization</li> </ul>	<ol style="list-style-type: none"> <li>1. Fort et al, 2011</li> <li>2. White et al., 2012</li> <li>3. William et al, 2013</li> </ol>
<b>Misconceptions</b> <ul style="list-style-type: none"> <li>• Misconception about disease and screening</li> <li>• Procedure can cause cervical cancer and infection from other diseases</li> </ul>	<ol style="list-style-type: none"> <li>1. William et al, 2013</li> <li>2. White et al, 2012</li> <li>3. Teng et al, 2014</li> </ol>
<b>Spousal support</b>	<ol style="list-style-type: none"> <li>1. Mutyaba et al. 2007</li> <li>2. William et al, 2013</li> </ol>
<b>Health care worker attitude</b>	<ol style="list-style-type: none"> <li>11. Gatune and Nyamongo, 2005</li> </ol>

	12. Mutyaba et al. 2007 13. Ngugi et al., 2011 14. Ndikom and Ofi, 2012 15.
<b>Financial constraints</b> <ul style="list-style-type: none"> <li>• Cost of screening</li> <li>• Cost of transportation</li> </ul>	5. Ndikom and Ofi, 2012 6. Mutyaba et al. 2007 7. Ngugi et al., 2011 8. Fort et al, 2011
<b>Busy with housework</b>	1. Ngugi et al., 2011

### ***Fear of procedure and outcome***

In all the studies, the majority of the participant reported fear that the procedure is painful (Williams et al.,2013; Gatune and Nyamongo, 2005; Mutyaba et al., 2007; Fort et al.,2011; Ngugi et al., 2012; Ndikom and Ofi, 2012; Teng et al., 2014; White et al., 2012). In one study, participants believed that the procedure involved removal and re-insertion of the uterus and that this is a very painful process (Williams et al.,2013). The fear of untoward effects of the procedure was another factor stated in this study, where some participants believed it can lead to infertility and that HIV can be contracted through the procedure. Participants also cited the fear of being screened for HIV during the procedure as barrier to utilization (Williams et al.,2013; Gatune and Nyamongo, 2005).

### ***Lack of awareness and knowledge of cancer and services***

Poor awareness of cervical cancer and preventive opportunities were reported in six studies (table 3). Two studies found that significant number of participants displayed absolute lack of knowledge about the disease (Gatune and Nyamongo, 2005; Ndikom and Ofi, 2012). Almost all participants in one study admitted to lack of knowledge about the disease and available services as a reason for not going for screening (Gatune and Nyamongo, 2005). Other studies reported a low level of awareness about the disease, risk factors as well as available screening services. Majority of the women in four studies believed that the disease is incurable and diagnosis means unavoidable death (Fort et al.,2011; Ngugi et al., 2012; Ndikom and Ofi, 2012; William et al., 2013)

### ***Screening is unnecessary***

Five studies (table3) revealed that women who have insufficient knowledge about the disease showed little concern about screening. Gatune and Nyamongo (2005) reported that some participant felt “*there is no need for screening when we don’t have any symptom*”. Teng et al. (2014) found that most participants believed that screening is only for sexually active women. Participants in two studies have contrasting views about which group of women in the community is more susceptible and higher risk (Ngugi et al., 2012; Ndikom and Ofi, 2012).

### ***Access to screening services***

Proximity to hospital equipped with laboratory facilities and personnel to carry out cytology for Pap smear was observed as a factor inhibiting accessibility and uptake of cervical cancer screening. Difficulty in navigating health care facility and services was reported as another barrier; lack of information regarding direction of where and when to obtain service has deterred some women from accessing available services (Fort et al., 2011). Waiting time for



screening in the hospital was identified by nursing mothers as a barrier to access cervical cancer screening program (Ngugi et al, 2012).

### ***Stigma and shame of disease***

Women in sub-Saharan Africa face stigmatization and embarrassment whenever they discuss or attempt to access cervical screening services. Because cervical screening involves pelvic examination and may be combined with treatment for reproductive or sexually transmitted infection, it can give a negative connotation about a woman (Fort et al., 2011).

Women reported that the social network a woman keeps can be a barrier to screening uptake (William et al., 2013). Promiscuity, unsanitary life style and evil curses were seen as some of the reasons a woman will be hesitant going for cervical screening (White et al., 2012). Participants in these studies also reported their fear of societal rejection as a reason affecting disclosure of early symptoms and utilization of cervical cancer screening services. Women also reported that sometimes society ostracisation happened with disclosure, this practice has hindered some women in the community from cervical cancer screening.

### ***Fatalism***

Fatalistic view of a positive outcome of the screening was reported by participants as a barrier to uptake screening (Fort et al., 2011; William et al., 2013). Participants in these studies viewed a positive result as a death sentence and so no point in going for screening. Others find solace in ignorance as they believe that “What you don’t know can’t kill you”.

### ***Modesty***

Most African women are very conservative about exposing their private part especially to members of the opposite sex. It is therefore difficult for most women to go for cervical cancer screening especially if the test is going to be performed by a male health care giver. White et al (2012) revealed that the gender of the care giver can be a hindrance to screening. The authors further revealed that having to undress for the procedure was a major barrier to utilization. One study reported a contrasting view where women preferred male health workers on the premises because they are more polite than their female health workers (Mutya et al., 2007). In another study, modesty or embarrassment was not seen as a barrier to service utilization (Teng et al., 2014).

### ***Misconception about disease and screening***

Lack of awareness and misinformation were also associated with misconception about cervical cancer and cervical cancer screening. Various misconceived risk factors are associated with cervical cancer were reported in three studies and these include abortions, excessive sexual intercourse, poor eating habit, environmental pollutants and spiritual affliction (Fort et al., 2011; White et al., 2012; William et al., 2013). Some women believed the screening process involves removal and reinsertion of the uterus; or that they might contracting other diseases such as HIV.

### ***Spousal support***

Patriarchal practice was an important barrier to take up cervical cancer screening. This factor was financially and culturally related. In most African community, the man is the head of the family and important decision regarding the family is made solely by him. One study reported that women desiring to go for cervical cancer screen might be seen by their spouse

to have been unfaithful (Mutyaaba et al., 2007). Another reason for lack of spousal support is the issue of the part of the body involved as most men believe this violates the pride and privacy of their woman (Williams et al., 2013). However majority of women in Teng et al (2014) does not see this as a barrier as they believe their health is more important with or without their spouse consent.

### ***Attitudes of health worker***

Negative attitude of health care personnel especially nurses towards women was mentioned as an important factor towards utilization of cervical screening service in four studies. According to Gatune and Nyamongo (2005), healthcare professional's attitude did not encourage uptake of screening services. This factor was echoed by participants in another study where health care workers did not provide the information or services (even when this was required as part of the service) and did not make an effort to make the procedure comfortable (Ngugi et al., 2012).

### ***Cost of screening and associated costs***

Four studies reported financial cost of cervical cancer screening as a factor limiting utilization. In a region where the poverty is high and there are many other pressing health issues demanding financial attention, out-of-pocket payment for non-emergency health services like cervical screening service is a major barrier to utilization faced by women (Ndikon and Ofi, 2012; Mutyaaba et al. 2007; Ngugi et al. 2011). Fort et al. (2011) found that fear of hidden charges as a major barrier to take up screening. Additional cost of transportation to access services was also reported to contribute to low utilization (Mutyaaba et al., 2007).

### ***Busy with housework***

One study reported that women said they were busy with housework and therefore did not participate in cervical screening (Ngugi et al, 2012).

## **DISCUSSIONS**

Sub-Saharan African women faced a number of barriers to access cervical cancer screening. They shared similar barriers despite the cultural and language diversities in the region. These include poor knowledge and awareness of disease and screening techniques, stigma and modesty, spousal support, physical access, cost of screening and associated costs and poor healthcare worker attitude. These were prominent themes reported in the included studies. Less is known about the factors facilitating cervical screening in SSA.

Improving awareness through education can enhance the demand for preventative health services. For any health project to be successful, good awareness about the project can enhance utilization (Sabates and Feinstein, 2006). Different studies have emphasized the effect of women's knowledge as an important determinant of perception of risk and subsequent health seeking behaviour. The general consensus from the included studies was that the level of awareness about cervical cancer and available screening services among women in Sub-Saharan Africa is either lacking or very low. This agreed with the findings from cross sectional studies examining perceived knowledge. Majority (72%) of participants in Cameroon have no prior knowledge about cervical cancer (Tebeu et al, 2008). Similar findings (70.6%) was observed in South Eastern Nigeria (Nwankwo et al. 2011). This factor is associated with the different misconceptions and lack of concern that women in the region have about risk

factors, perceived risk, perceived severity or screening for cervical cancer (Getahun et al., 2013). In other developing countries especially in South East Asia and South America, this factor was also identified as the main reason why women did not take up screening. Low level of awareness a precursor to, low perception of susceptibility and risk as well as misconceptions about the need for screening was the main factor identified in similar studies conducted in Malaysia and Philippines (Wong et al, 2009; Domingo et al, 2008).

It is recognised that women with low SES (illiterate, unemployed or in part-time employment) are more likely to have low perception of risk of diseases and therefore less likely to utilize preventive services (Lyimo and Beran, 2012; Kahes et al., 2012). Women with low SES as well as those living in rural areas have low perception of risk of cervical cancer. Some believed that cancer screening is only meant for the learned and the elite (Teng et al, 2014). Low SES is closely linked with the financial factor. Women with poor SES are less likely to be financially empowered to pay for cervical screening service. In a region where many live on less than USD\$2 a day, essential and emergency needs are given more priority than preventive services like cervical cancer screening (WBM 2014; Mutyaba et al, 2007). According to Fort et al. (2011) and Mutyaba et al. (2007), screening services in most government hospitals in the region is free, however when women are charged for ancillary services like, consultation fee, other laboratory tests and for treatment of any identified infection, utilization of services reduces.

Issues regarding sexuality or genitals and nudity are deemed sensitive and rarely discussed in most African communities. Lack of communication and understanding about reproductive health problems makes it difficult for most women to seek help when required. Further, African society is still highly patriarchal in nature and women need the consent of their husband to access cervical cancer screening. In many African culture, men are not expected to be involved in reproductive health issues and therefore they would not be involved in discussing women's health (Mutyaba et al, 2007). The lack of communication in marriage due to cultural practice hindered women from accessing screening services due to fear of being seen as unfaithful to their spouse.

Economically, men control the domestic purse in most African community, even when the women is employed and financially contributing to the family income. Most financial decision pertaining to the family are usually taken by the husband. This factor makes most women reluctant to request for money for screening purpose. Similar findings were reported elsewhere (Alemayehu and Mariam, 2013). However, in Uganda, participants universally agreed that cervical cancer screening is important with or without spousal consent (Teng et al., 2014).

Fatalism was another findings of this review. The emotional disturbance that may follow in the advent of a positive screening made utilization of screening service less desirable (Fort et al., 2011). Some participant saw no benefit in screening when positive outcome has no remedy (Ndikom and Ofi, 2012; Ngugi et al., 2012). This however contradicts findings outside Africa where perceived severity of the disease encourage women to utilize screening services (Watts et al., 2009).

The role of embarrassment as a barrier towards utilization of gynecological cancers in general has been detailed in many studies conducted globally. In a population-based survey in England, embarrassment was the most reported barrier women reported as barrier to cervical screening uptake (Gharoro and Ikeanyi, 2006). Women in SSA are not different from

their global counterpart in this regard; embarrassment is one of the findings of the present review.

Proximity to screening facility was identified as a major contributor to low utilization of cervical cancer screening service. Pap smear is structurally demanding and in most countries in SSA where infectious diseases and maternal and child health takes priority, few hospitals are equipped to provide Pap Smear at population level (Mutya et al., 2007). Our findings showed that distance and the cost of transportation were identified barriers to service utilization. Also facility navigation is another finding in our review; not knowing where exactly to go within equipped facility increases time taken to access service. This along with the time taken to be attended to by health care personnel increases access time, an important barrier considering the fact that most women utilizing screening services have demanding domestic (usually nursing mothers) and sometimes career schedules (Ndikom and Ofi, 2012; Teng et al., 2014).

It is imperative to mention the level of knowledge as well as attitude of health care workers in influencing women to utilise screening services. While the level of awareness, perceived risk, perceived severity and available preventive services are high compared with women in the general population, utilization of screening service remain significantly low (Gharoro and Ikeanyi, 2006). According to the studies conducted in Nigeria (Gharoro and Ikeanyi, 2006) and Uganda (Mutya et al, 2007), utilization of cervical screening services among female healthcare workers was low, 14.1% and 19% respectively. This is significant because healthcare workers are seen as the source of knowledge and role models to other women.

## **CONCLUSIONS**

To increase cervical cancer screening services in Sub Sahara Africa, an innovative service is needed to address obstacles preventing access to screening services and help-seeking behaviour, particularly cultural beliefs and practices. Efforts are also needed to improve awareness and knowledge of services as well as improving the quality of care and services.

## **Limitations**

Availability of quality research on this topic especially from Central African countries was a major limitation of this review. None of the selected studies used in this review was conducted in the Central African region and this excludes an important segment of the target population.

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